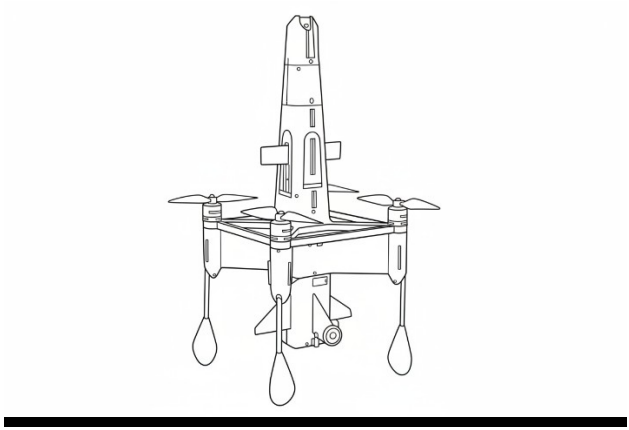
JEDI Shahed Hunter



Ukrainian Counter-UAS Interceptor Drone

Counter-UAS Data Card — Air Domain — Radar-Cued Autonomous Interceptor

Image Source: Ukrainian Ministry of Defense — mod.gov.ua (public domain) — search "JEDI Shahed Hunter" on mod.gov.ua

1. IDENTITY & DESIGNATION

Official Designation: JEDI Shahed Hunter

Manufacturer: JEDI (Ukrainian defense technology company)

Country of Origin: Ukraine

MoD Approval: March 23, 2026 — codified and authorized for operational use by Ukrainian Ministry of Defence

Also Known As: JEDI; Shahed Hunter

Organization Type: Ukrainian defense technology company; commercial defense manufacturer

2. CLASSIFICATION

Domain: Air

Category: Military / Tactical — Counter-UAS Kinetic Interceptor

Sub-Category: Radar-cued autonomous quadcopter interceptor; expendable kinetic interceptor

Terminal Mode: Expendable — kinetic impact / proximity detonation against aerial target

Expendable: Yes — one use per engagement

Mission: Autonomous intercept and destruction of Shahed-class one-way attack drones and reconnaissance UAVs

Target Set: Shahed-136 / Geran-2; Gerbera decoy drone; Geran-3 jet-powered variant; Zala

reconnaissance UAV; Supercam reconnaissance UAV

3. PHYSICAL SPECIFICATIONS

Configuration: Quadcopter — vertical takeoff; four high-performance electric motors; lightweight durable frame

Weight: Just over 4 kg

Payload: Up to 500 grams — warhead sufficient to destroy a Shahed-class attack drone

Airframe: Lightweight, robust frame — optimized for high-speed intercept geometry

Launch Method: Vertical takeoff — no catapult required; operates from any flat surface

Camera System: Dual sensor suite: daylight EO camera and thermal infrared camera — all-weather, day/night capable

4. PROPULSION & PERFORMANCE

Propulsion: Electric; four high-performance brushless motors; high-capacity battery

Max Speed: Exceeds 350 km/h (218 mph) — faster than Shahed-136 cruise speed of 185–200 km/h

Max Altitude: Up to 6 km (19,685 ft) — significantly higher ceiling than Sting or General Chereshnya interceptors

Engagement Radius: Up to 40 km — one JEDI system can defend a 40 km radius airspace sector

Endurance: [VERIFY — not publicly disclosed; implied short-duration intercept mission profile]

5. GUIDANCE, NAVIGATION & CONTROL

Target Cueing: Automatic radar data reception — JEDI receives targeting data directly from radar systems without manual operator input; enters engagement zone more rapidly than manually cued systems

Autonomy Level: High — autonomous target acquisition, tracking, and terminal guidance; operator manages via ground control station but drone does not require continuous manual control

Terminal Guidance: Autonomous homing — automatic lock-on and terminal intercept after radar cue; daylight and thermal cameras support autonomous terminal phase

Ground Control Station: Dedicated GCS ensures flight coordination, communications, and targeting accuracy; system cost approximately €70,000 including initial drone equipment

Operator Interface: [VERIFY — GCS-based; specific interface type not publicly disclosed]

Fiber-Optic Option: No

> ⚠ ***PETER NOTE:*** *The radar-cue architecture is the engineering differentiation that separates the JEDI from FPV-class interceptors like the Sting. The Sting requires a human pilot to fly an intercept and relies on thermal AI only as a*

> *jamming fallback. The JEDI receives the radar track automatically and autonomously executes the intercept. That is a fundamentally different command architecture — one that scales to high-volume simultaneous engagements in a way that human-piloted FPV cannot. A single radar node can cue multiple JEDI interceptors simultaneously. A single FPV pilot can only fly one Sting.*

6. SENSORS & DEFEAT MECHANISM

Primary Sensors: Daylight electro-optical camera; thermal infrared camera — dual-sensor suite enables all-weather, day/night operations

Defeat Mechanism: Kinetic impact or proximity detonation — 500g warhead sufficient to destroy Shahed-class targets

Detection Capability: Autonomous target acquisition and tracking from radar cue to terminal engagement

Target Discrimination: Dual EO/IR sensor suite enables discrimination between target types; confirmed against Shahed-136, Geran, Gerbera attack drones and Zala, Supercam reconnaissance UAVs

7. COST & PROCUREMENT

Unit Cost — Daylight Variant: Approximately €1,328 (~$1,450 USD) — listed on Brave1 Ukrainian armed forces marketplace

Unit Cost — Thermal Variant: Approximately €1,743 (~$1,900 USD) — thermal imaging camera variant

Ground Control System: Approximately €70,000 (~$76,000 USD) — full GCS set including radar data reception and initial drone equipment

Production Capacity: Over 1,000 units per month as of March 2026

Procurement Channel: Ukrainian armed forces via Brave1 defense marketplace; MoD codified and authorized March 23, 2026

Export Status: [VERIFY — Ukrainian export restrictions apply to interceptor drones as a category; same legal framework as Sting export ban]

Comparison — Shahed-136: $50,000–$70,000 Russian production cost; cost-exchange ratio approximately 30:1 to 50:1 in defender's favor at thermal variant price

Comparison — Patriot PAC-3: Over $4,000,000 per interceptor missile; cost-exchange ratio over 2,000:1

> ⚠ ***PETER NOTE:*** *At €1,328 for the daylight variant, the JEDI is the lowest-cost confirmed Ukrainian interceptor drone currently listed on the Brave1 marketplace. The Sting runs $2,100–$2,500 per unit. The*

> *JEDI's price point combined with its autonomous radar-cue architecture makes it the most scalable interceptor in the Ukrainian inventory — you can field more of them, cue them automatically, and engage simultaneous threats without multiplying pilot headcount. That is the defender's dilemma solved at the systems level, not just the platform level.*

8. OPERATIONAL HISTORY

MoD Authorization: March 23, 2026 — Ukrainian Ministry of Defence codified and authorized JEDI Shahed Hunter for operational use in the Armed Forces of Ukraine

Combat Record: [VERIFY — MoD statement indicates system "successfully destroys" Shahed-type drones implying pre-authorization combat use; specific kill count not publicly disclosed at time of card writing]

Target Kills Confirmed: Shahed-136 / Geran-2; Gerbera decoy drone; Zala reconnaissance UAV; Supercam reconnaissance UAV — all confirmed target types per MoD authorization statement

Production Status: In production at 1,000+ units per month; delivery to Ukrainian Defence Forces ongoing

Marketplace Listing: Listed on Brave1 Ukrainian armed forces procurement marketplace — the same platform used for Sting and other Ukrainian interceptors

9. COUNTERMEASURE VULNERABILITY PROFILE

RF Jamming: MODERATE — autonomous radar-cue architecture reduces dependence on continuous RF control link. Once radar cue is received and intercept initiated, autonomous terminal guidance continues without operator RF input. Partial jam resistance by design.

GPS Spoofing: LOW IMPACT — short engagement duration and 40 km operational radius limit GPS denial exposure. Autonomous terminal guidance via EO/IR reduces GPS dependency in terminal phase.

EMI / EMC Attack: HIGH — commercial-grade electronics throughout; no confirmed MIL-STD-461 hardening. Same commercial electronics vulnerability as Sting and General Chereshnya interceptors. Cost philosophy accepts this vulnerability.

Microwave (HPM) Attack: HIGH — unhardened commercial electronics; susceptible to HPM if adversary deploys ground-based or drone-based directed energy C-UAS. In current operational context Russia has no deployed HPM C-UAS equivalent.

Kinetic Intercept: VERY LOW — at 350+ km/h the JEDI is faster than every Shahed-class target it engages. Quadcopter maneuverability at intercept speed makes kinetic counter impractical.

Acoustic / Visual Detection: LOW — electric propulsion limits acoustic signature. Small airframe limits radar cross-section. Operationally relevant only if adversary has forward-deployed sensor arrays.

Overall Vulnerability Rating: MODERATE — electronic vulnerabilities are real but theoretically constrained in current operational context. Autonomous architecture provides meaningful RF resilience. HPM vulnerability is the primary theoretical risk with no current Russian deployed counter.

10. CONVERGENCE NOTES

The JEDI Shahed Hunter represents the next architectural step in the Ukrainian interceptor evolution — from human-piloted FPV with AI fallback (Sting) to radar-cued autonomous intercept with human oversight at the system level rather than the platform level. That is a meaningful doctrinal shift.

The radar integration is the key capability. Every earlier Ukrainian interceptor required a human to observe the target, fly the intercept, and manage the terminal engagement. The JEDI receives the targeting solution from the radar network and executes autonomously. The human operator manages the system — the drone manages the kill chain. At scale, this means one radar operator can cue dozens of simultaneous

intercepts that no human pilot team could execute manually.

At €1,328 per unit and 1,000+ units per month production, the JEDI is positioned to become the volume intercept layer of Ukraine's layered air defense architecture — with Patriot and NASAMS handling ballistic and cruise missile threats, and JEDI / Sting / General Chereshnya handling the Shahed swarm tier at cost-appropriate price points.

> ⚠ ***PETER NOTE:*** *The convergence thesis runs through this platform at the system level. The Shahed-136 is a cruise missile evolved from drone economics. The JEDI is an autonomous interceptor evolved from FPV drone economics. Both are enabled by the same commercial component cost collapse. The radar-cue architecture mirrors the autonomous terminal guidance development arc of every cruise missile seeker program I worked on — remove the human from the terminal phase, reduce reaction time, increase Pk. Ukraine built the same thing for under two thousand dollars a copy.*

11. SYSTEM ARCHITECTURE NOTES

The JEDI Shahed Hunter is explicitly a system, not just a drone. The MoD authorization covers the full UAS — drone, sensors, and ground control station as an integrated package. The

GCS handles radar data reception, flight coordination, communications, and targeting accuracy. The €70,000 system cost reflects this: the drone is €1,328–€1,743; the radar integration infrastructure is the major cost element.

This architecture implies a different deployment model than the Sting. The Sting deploys with a two-person FPV team — pilot and observer — and can be set up quickly in a forward position. The JEDI requires radar network connectivity and a GCS. It is more infrastructure-dependent but proportionally more autonomous and scalable once the radar network exists. Ukraine's existing air defense radar network provides the cueing infrastructure the JEDI depends on.

Radar Integration: Automatic data reception from existing Ukrainian air defense radar network — no additional radar hardware required if network coverage exists

Scalability: One radar node can cue multiple JEDI interceptors simultaneously — high-volume swarm engagement capability without proportional pilot headcount increase

12. SOURCES & CROSS-REFERENCES

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Cross-Ref: Wild Hornets Sting (FPV-class Ukrainian interceptor; human-piloted with AI thermal fallback); General Chereshnya Bullet (companion Ukrainian interceptor); SkyFall P1-SUN (fixed-wing interceptor); Shahed-136 / Geran-2 (primary target); Gerbera (decoy target); Zala (reconnaissance target); Raytheon Coyote Block 3NK (Western HPM C-UAS comparison)